

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Commerce Commission)	
On Its Own motion)	
)	18-NOI-01
Notice of Inquiry Regarding)	
Electric Vehicles)	

INITIAL COMMENTS OF COMMONWEALTH EDISON COMPANY

INTRODUCTION

Commonwealth Edison Company (“ComEd” or “the Company”) submits these Initial Comments in response to the Illinois Commerce Commission’s (“ICC”) Notice of Inquiry (“NOI”). ComEd appreciates the opportunity to share these responses with the NOI stakeholders and looks forward to the continuing dialog that this process enables.

ComEd believes that electric vehicles (“EVs”) have the potential to provide beneficial electrification to Illinois, by lowering emissions, increasing economic opportunity, improving utilization, and potentially putting downward pressure on electric rates. While EVs will increase energy delivered through the grid, proactive management of EVs through mechanisms such as customer interaction, education and off-peak charging, could help address the new load in the most efficient manner. In order to accelerate the adoption of EVs and to realize the potential benefits, incentives may be helpful to increase the availability of EV charging stations (also called electric vehicle supply equipment, or (“EVSEs”) and associated infrastructure.

Although adoption of EVs and the availability of EV charging infrastructure are significantly increasing, they still are nascent in Illinois. A clear process could be beneficial to encourage EV adoption, thoughtfully plan for related charging infrastructure development, and also encourage lower carbon alternatives. The process should involve a variety of stakeholders, including, but not limited to, consumer advocates, municipalities, charging and vehicle manufactures, and electric utilities.

1. *Do EVs contribute to energy efficiency in Illinois by relying on electricity instead of fossil fuels? If so, how?*

In this response and throughout these Initial Comments, ComEd uses “energy efficiency” to mean generally “reducing the amount of energy required to provide the same products and services.”

Vehicles that rely on electricity, rather than fossil fuels, contribute to the overall energy efficiency of Illinois. According to the Department of Energy, conventional gasoline vehicles only convert about 17% to 21% of the energy stored in gasoline to power at the wheels. Comparatively, EVs convert about 59% to 62% of the electrical energy from the grid to the power at the wheels.¹

Similarly, electric buses offer potential energy efficiency opportunities. Recent studies by the National Renewable Energy Laboratory (“NREL”)² found that compared to 4.2 miles per diesel gallon achieved by traditional diesel transit buses, electric buses can achieve the equivalent of up to 17.3 miles per diesel gallon.³

In this response and throughout these Initial Comments, ComEd is not referring to “energy efficiency” as it relates to ComEd’s Energy Efficiency Program, created by the Future Energy Jobs Act (“FEJA”), 220 ILCS 5/8-103B. Subject to this caveat, ComEd states that it is not likely that additional EVs would directly impact the Company’s Energy Efficiency Program.

2. *Describe whether and how EV charging stations will affect overall energy efficiency in Illinois.*

Increased numbers of EV charging stations will increase electricity consumption by adding new load. However, this assists in the process of beneficial electrification by transitioning energy from less efficient and higher emission-based fuels to lower emission and higher efficient forms of energy. Additionally, if efficient EV charging stations are used, the benefits could be amplified further. For example, ENERGY STAR has Key Product Criteria for EV charging stations. Energy Star certified charging equipment uses 40% less energy than standard charging equipment when operating in standby mode (i.e., not actively charging a vehicle). This is an important statistic as EV chargers are typically in a standby mode for about 85% of the lifetime of the charger.⁴ Currently, eighteen EVSEs are ENERGY STAR certified.⁵ An increased

¹ The electrical losses described here are from the EV charger to the car. U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, *All-Electric Vehicles*, available at <https://www.fueleconomy.gov/feg/evtech.shtml> (last accessed October 17, 2018).

² National Renewable Energy Laboratory. (2017). *Foothill Transit Battery Electric Bus Demonstration Results: Second Report*, available at <https://www.nrel.gov/docs/fy17osti/67698.pdf> (last accessed October 19, 2018)

³ National Renewable Energy Laboratory. (2016). *Fuel Cell Buses in US Transit Fleets: Current Status 2016*, available at <https://www.nrel.gov/docs/fy17osti/67097.pdf> (last accessed October 19, 2018)

⁴ ENERGY STAR. (2018, September 26). *Electric Vehicle Supply Equipment (EVSE)*. Retrieved from ENERGY STAR: <https://www.energystar.gov/products/other/evse>

⁵ Energy Start Certified Electric Vehicle Supply Equipment, available at <https://www.energystar.gov/productfinder/product/certified-evse/results> (last accessed October 17, 2018).

number of EVSEs that are ENERGY STAR certified would positively impact Illinois' overall energy efficiency.

In this response and throughout these Initial Comments, ComEd is not referring to "energy efficiency" as it relates to ComEd's Energy Efficiency Program, created by FEJA, 220 ILCS 5/8-103B. Subject to this caveat, ComEd states that additional EV charging stations could directly impact the Company's Energy Efficiency Program if the Program is able to incent and claim savings from energy efficient charging stations, such as those that are ENERGY STAR certified.

3. Describe whether and how development of additional charging infrastructure will affect overall energy efficiency in Illinois.

The availability of additional charging infrastructure in Illinois may encourage customers and businesses to purchase EVs, which would likely increase both the EV rate of adoption and the number of EVSEs installed. Promoting EVSEs that are energy efficient, such as those that are ENERGY STAR certified, could help ensure that this new load (at least the charging portion of it) was as energy efficient as possible.

4. Identify best charging practices and whether and how they can relieve pressure on the grid during peak-demand times, as well as relieve pressure on individual circuits.

Charging managed through smart chargers that are integrated to distributed energy resource management systems ("DERMS"), and tied into ComEd's advanced distributed management systems ("ADMS") may help reduce peak demand in localized areas as well as the broader region. In addition, incentives, whether economic or in describing the environmental impact of charging, could also support this effort. EVs supported by these additional technologies may be enabled to participate in strategies such as demand response, peak load shifting, and peak load shaving. Demand Response is achieved through reducing the connected EV load on the charging stations, peak load shifting through charging during off peak hours, vehicle to grid ("V2G") during peak hours, and by participating within aggregated DER models. EVs may also provide peak load shaving by meeting the load within the distribution system and reducing the peak load as observed at the Regional Transmission Organization ("RTO") level.

A) Describe whether and how transportation electrification in the public and non-residential sectors will affect the load on the electric grid.

Transportation electrification in the public and non-residential sectors will add to the total load on the electric grid and can be classified as beneficial electrification. A properly planned process, and optimally designed implementation of transportation electrification, will provide a better means of control and offer the ability to use the increased load to integrate renewable energy and distributed energy. A "bottom-up" approach with feeder level analysis would be needed to help relieve potential local loading issues that EVs might cause on the system. Pricing mechanisms could also support and influence customer charging habits, and therefore support increased transportation electrification.

5. *Describe whether and how development of additional charging infrastructure will affect grid reliability and resilience.*

By themselves, EVs do not contribute to improved grid reliability or resiliency.⁶ In the future, however, EVs may be able to enhance grid reliability with the help of monitoring, visualization, and real-time management and V2G capabilities. In the future EVs could participate in demand response programs, peak shaving, and reducing load on individual feeders as well as manage energy supply costs. Through both charging and V2G capabilities, EVs could support local reliability objectives. Additionally, through V2G, EVs have the potential to help provide emergency back-up and reserves, as well as demand response or capacity firming to support penetration of intermittent generation.

6. *What other types of technology can be used to support grid reliability and resilience with continued electrification of the transportation sector?*

The following technologies could be used to support grid reliability and resiliency:

- Managed control of EV charging technologies, integration with DERMS and ADMS, and high-speed, low-latency communications networks, which enable the managed control technologies along with improved protection and control schemes.
- Technologies that allow for wide-area observability of smart chargers and Extra Fast Chargers (“XFC”), which provide granular management capabilities, and the ability to visualize and monitor the system through Real Time Distribution State Estimation and 3 phase unbalanced Power Flow.
- Advanced cybersecurity measures, including fingerprinting technologies and Blockchain.
- Microgrids, which could benefit from energy resources like EVs.

7. *Do vehicle-to-grid capabilities need to be enabled in order for EVs to provide grid support?*

The ability of EVs to contribute to the grid is dependent on the ability to control charging and discharging. Such control is possible through grid controls, because V2G capabilities enable EVs to send energy back to the grid, helping to provide intermittent generation firming capabilities, enhanced peak load shaving, and offer non-spinning reserve support on the distribution system.

⁶ For purposes of these Initial Comments, ComEd is using “grid resilience” to mean the ability of the distribution system to withstand and recover from a destructive event, whether environmental or security-based. ComEd is using “grid reliability” to mean “statistical reliability”, which is traditionally measured using Customer Average Interruption Duration Index (“CAIDI”) and System Average Interruption Frequency Index (“SAIFI”).

8. *What control by the utility is necessary to ensure reliability and efficient operation of the grid?*

EVs connecting to the grid as conventional load do not impact reliability of the grid by themselves. However, with control and V2G capabilities, the utility should be able to monitor, visualize, and manage the wider region as well as localized areas so that it can maintain real-time reliability, as well as safe operation of the system.

9. *Identify cybersecurity implications, if any, of widespread EV adoption.*

EVs and the electrification of the transportation section are supported by networked electronic technologies. As these communication-enabled and smart technologies integrate, and interact with the grid, they have a potential to cause widespread issues.

A) *Discuss the potential for EVs to be a vector for smart grid control network penetration.*

EVs could be managed and coordinated in a smart manner through DERMS and ADMS in localized areas and wider regions to help control the grid with the help of fast speed communication infrastructure. Combined, these technologies that provide granular monitoring, visualization, and control would help increase reliability and resiliency, as well as, reduce losses, and optimize energy on the grid.

B) *Discuss the potential for EVs to be vector for causing physical disruptions if charging and discharging is coordinated in a malicious manner as part of a botnet under the control of malicious actors.*

Because EVs applications and infrastructure present the ability for control through networked communication systems, there is a potential for EVs to be used in a malicious manner. Therefore, advanced cybersecurity components, monitoring, visualization, and management applications are needed on local and wider distribution network to observe, identify, and mitigate any potential issues.

10. *Describe regulatory barriers to increased electrification of the transportation sector.*

Efforts to increase transportation electrification would benefit from clear regulatory and public policy direction. Currently, the lack of certainty pertaining to the recovery of utility-owned EV infrastructure and charging stations is a regulatory barrier for utilities.

Beneficial electrification being considered as a part of energy efficiency programs will also support in the increased electrification of the transportation sector.

A) Identify possible solutions to overcome regulatory barriers.

Possible solutions to overcome the regulatory barriers identified above include (1) assurance of cost recovery for utilities for EV infrastructure and charging stations; and (2) clear policy direction regarding EVs and EV charging infrastructure.

11. Describe economic barriers to increased electrification of the transportation sector.

One of the primary economic barriers for the increased electrification of the transportation sector is the high up-front costs, such as the vehicle purchase price (relative to traditional internal combustion engine (“ICE”) vehicles) and the purchase and installation of charging equipment.

A) Identify possible solutions to overcome economic barriers

Incentives, such as rebates, subsidies and tax incentives, on the purchase or lease of the vehicle and the purchase and installation of charging equipment, are possible solutions to overcome economic barriers. In addition, education about the lifecycle economic advantages of EVs would be helpful to encourage potential vehicle buyers.

12. Describe any other barriers to increased electrification of the transportation sector.

Other barriers include:

- a limited number of public charging stations;
- lack of knowledge/awareness about EV benefits;
- limited EV models;
- the need to charge frequently (relative to ICE vehicles);
- limited range of EVs (relative to ICE vehicle refueling); and
- general lack of expertise and motivation by auto dealers to sell EVs.

A) Identify possible solutions to overcome those barriers.

Possible solutions to overcome barriers to increased electrification include:

- increased charging infrastructure deployment;
- education and awareness programs;
- incentives and rebates on vehicles and chargers; and
- legislative mandates that require auto manufacturers to sell a minimum number of EVs.

13. Should Illinois prioritize overcoming certain barriers over other barriers?

Yes.

14. *Describe the cost benefits associated with increased EV deployment in Illinois.*

- If properly managed, EV charging could put downward pressure on per kWh rates.
- From a utility customer perspective, a greater demand for kWh, which if properly managed, could improve the utilization of installed distribution infrastructure.
- While EV owners will likely see an increase in kWh consumption and therefore correspondingly higher electric bills, they will likely pay less for energy and transportation costs as well as vehicle maintenance.

A) *What is the effect on the State?*

Due to a lower amount of gasoline sales and consumption, EV deployment may have an impact on gas tax proceeds. Increased deployment of EVs will also reduce greenhouse gas (“GHG”) emissions. Additionally, EV deployment will result in more domestic (versus foreign) sourced fuel used for transportation.

B) *What is the effect on individual EV owners?*

While EV owners may likely realize a larger electric bill due to increased consumption, they will pay less for energy and transportation costs and vehicle maintenance overall. Charging off-peak would also provide EV owners with the opportunity to pay a lower rate per kWh through rate options, such as hourly pricing.

15. *Describe the environmental benefits associated with increased EV deployment in Illinois.*

A) *Compare environmental benefits to the environmental detriment if additional EV and charging infrastructure is not developed and deployed.*

According to a study conducted by M.J. Bradley & Associates,⁷ absent large scale EV adoption, baseline annual fleet emissions are projected to fall to 32M tons by 2050 from a current level of 53M tons (a 53% reduction). This is based on expected improvements in conventional vehicle efficiency. In an aggressive scenario, wide scale adoption of EVs could reduce this baseline by an additional 7.7M tons to 24.3M tons (a 64% reduction from current levels). Through 2050, there could be a cumulative GHG reduction of 97 million metric tons if EVs are aggressively adopted in Illinois. Bradley equates the monetized social value of these reductions to \$441M/year by 2050, which includes improvements in quality of life and reductions in medical costs.

⁷ *Plug-in Electric Vehicle Cost-Benefit Analysis: Illinois* prepared by M.J. Bradley & Associates, LLC (MJB&A), September 2017.

B) *Describe the environmental effect of EVs on the environment over the lifespan of an EV.*

The annual CO₂ emissions for a battery-only electric vehicle (“BEV”) are approximately 1.4 metric tons, as compared to an ICE vehicle’s annual CO₂ emissions of approximately 3.9 metric tons⁸. Thus, over the lifespan of a BEV (approximately 15 years) there would be a net reduction of about 40 metric tons of carbon emitted into the atmosphere per vehicle.

16. *Describe any other benefits associated with increased EV deployment.*

Transitioning to EVs provides a great opportunity for the U.S. to achieve energy independence by replacing the consumption of foreign sourced petroleum with domestic energy sources. Electric vehicles reduce noise pollution, creating a more comfortable environment for society, providing opportunities for increased productivity, and improving employee safety.

17. *Describe whether more charging stations should be developed in Illinois.*

Yes. As electric vehicle penetration increases, there will be a need for additional charging stations. In particular, there are potential opportunities to increase the number of charging stations in urban, underserved areas, as well as with multi-unit dwellings. Some factors that can be used in determining location, type, and number of the chargers are feeder loading, landmarks, population density, existing charging stations and distance to highways.

A) *What external sources could be used to identify the optimal ratio of EVs to charging stations?*

N/A

B) *Describe the rate at which additional public charging infrastructure needs to be developed to meet the demand of increasing numbers of EVs in Illinois.*

N/A

C) *To what extent and at what rate do customer-owned chargers need to be developed?*

N/A

⁸ PJM. (2018).2013-2017 CO₂, SO₂, and NO_x Emission Rates. available at <https://www.pjm.com/-/media/library/reports-notices/special-reports/20180315-2017-emissions-report.ashx?la=en> (last accessed October 19, 2018).

18. *Identify the costs associated with installing additional charging infrastructure throughout the state. Assume that installation includes distribution build out, customer make-ready work, and charging equipment.*

Currently the make-ready work and cost of EVSE equipment is borne by the individual customer or entity installing the charging infrastructure, as well as any applicable financial incentives or rebates. With respect to utility-related charges any “standard” distribution equipment that must be installed by the utility as a result of the charging infrastructure goes into rate base and the attendant costs allocated to the applicable classes when setting rates. However, any distribution equipment that would be considered “non-standard” is recovered through a contract (Rider - Nonstandard Services and Facilities) between the utility and the customer installing the charging infrastructure. Additionally, any significant investments in distribution infrastructure, such as line extensions or substation upgrades, may require refundable deposits made by the customer to the utility under (Rider DE – Distribution Extension).

A) *Describe who would carry the costs of each aspect of building additional charging infrastructure.*

See ComEd’s response to 18.

B) *Describe whether ratepayer funds would pay for any aspect of building charging infrastructure.*

See ComEd’s response to 18.

19. *Describe whether additional charging stations should be installed in densely populated areas, in areas outside densely populated cities, or both.*

Additional charging stations are needed in both urban and rural areas. Installing additional charging stations in densely populated areas would not only increase the visibility of electric vehicles but provide a greater number of EV owners with more charging options, while installing them outside densely populated areas would allow EV owners the ability to travel greater distances and help mitigate “range anxiety”.

A) *Describe how EV charging infrastructures could penetrate low income communities that generally do not have high EV adoption.*

A utility program that serves all its customers and demographics could provide EV charging infrastructure to low-income communities not currently being served by the competitive EV charging market, which will also encourage further EV adoption in the community. In addition, EV charging infrastructure can support the further penetration of electrified transportation options such as buses and trains, which can serve the breadth of the population.

20. Discuss ownership of charging stations.

A) Discuss whether utilities should own charging stations. Explain why or why not.

Yes, utility ownership of public use charging stations is an important element for the advancement of electrification of the transportation sector. In particular, while not limited to any specific market or purpose, utility ownership could assist with placement of charging stations in areas that are underserved. Generally, underserved areas lack access to places to charge because they do not have garages or home charging equipment. Underserved market segments could include renters, low income neighborhoods, multi-unit dwellings, and curbside charging. An increase in the number of public charging stations, combined with educational programs, would likely help build EV awareness and expand access to charging opportunities.

B) Discuss whether third party vendors should own the charging stations? Explain why or why not.

Currently, third parties own charging stations in Illinois. A combination of utility and privately-owned charging stations is a possible solution, ensuring equitable access to maximize benefits to all.

21. Describe whether charging stations should consist of DC Fast Chargers, slow chargers, or a mixture of both. Explain why.

As EVs become an increasingly significant way that people and goods are transported, a variety of charging stations will be needed to serve different uses. Though slow chargers categorized as Level 1 and Level 2 have a lower up-front cost, Direct Current Fast chargers (“DCFCs”) have the capacity to fully power more vehicles per dollar invested. Thus DCFCs, while more costly initially, offer the customer the benefit of fast charging and the investors financially benefit from repeated and extended use. A new, even faster charging technology, XFCs, might also be optimal in certain situations, providing the same benefits as the DCFCs, possibly even to a greater degree. Though slower charging stations may be sufficient to serve most residential uses, other users, such as emergency response organizations, larger vehicles like buses or trucks, or some commercial organizations, may require faster charging capabilities.

22. What other utility service options, especially those currently offered in other jurisdictions, could promote EV adoption?

Other utility service options that could help promote EV adoption include, but are not limited to:

- time of use rates;
- limited duration demand holidays;
- rebates for EVs and charging stations;
- EV-related education and awareness events and literature;
- rewards programs for optimizing charging behaviors;

- rebates for public transportation (e.g., electric buses and batteries); and
- demand management/response through battery storage.
- emergency road-side charging

23. *What kind of building code consideration should be kept in mind?*

New state construction building codes that require or enable EV charging should be considered. Examples of construction building codes that have been proposed or adopted in other jurisdictions⁹ include requiring:

- a 240 volt circuit or upgraded wiring or conduit for future installation in the garage or parking area for new residential construction;
- a conduit from the service panel to the parking area, with pre-wiring to allow charging to be installed in the future in a certain percentage of parking spaces for new multi-family construction; and
- a conduit from the service panel to the parking area, with pre-wiring to allow charging to be installed in the future in a certain percentage of parking spaces for commercial construction; for large parking areas require that there be some minimum number of actual charging units installed.

24. *What kinds of ordinance changes can help encourage EV adoption?*

See responses to number 23 and 25.

25. *What other municipal codes can encourage EV adoption?*

Municipal codes and regulations that encourage EV adoption include, but are not limited to:

- parking ordinances that acknowledge and accommodate EVs and EVSEs;
- minimum EV space requirements for municipal and privately-owned lots/garages;
- allowing EVSEs to be installed on public roads and highways;
- time-limited parking to increase charging turnover;
- reduced or eliminated registration fees;
- high occupancy vehicle (“HOV”) lane access; and
- standardized, expedited permitting and inspection processes for new EVSEs.

⁹ See Southwest Energy Efficiency Project, EV programs, available at <http://www.swenergy.org/transportation/electric-vehicles/building-codes> (last accessed October 17, 2018).

26. Describe technical standards, guidelines, and best practices to manage EV charging standards.

Today, some technical standards have been developed while others are in progress. These standards govern charging speeds, charging connectors, safety requirements, interoperability and smart charging (including data management, exchange and access), amongst others.

The most widely adopted standard governing the installation of EV charging equipment is the National Electrical Code (“NEC”), specifically Article 625. NEC Article 625 concerns the wiring and equipment external to the EV that connects the vehicle to a supply of electricity for battery charging.

Other standards include:

- IEC 61851-1:2017, which applies to EV supply equipment for charging electric road vehicles, with a rated supply voltage up to 1 000 V AC or up to 1 500 V DC and a rated output voltage up to 1 000 V AC or up to 1 500 V DC; and
- IEC 61980-1:2015, which applies to the equipment for the wireless transfer of electric power from the supply network to electric road vehicles for purposes of supplying electric energy to the RESS (Rechargeable energy storage system) and/or other on-board electrical systems in an operational state when connected to the supply network.

27. Describe whether utilities should charge time-varying rates, such as time-of-use rates, to incentivize EV penetration in the state. Explain why or why not.

A) How would EV drivers benefit from these rates?

Yes, utilities should offer time varying rates to encourage off-peak charging. Off-peak supply is often lower in cost, and if customers are on demand based rates, delivery costs could be minimal for EV charging. For example, EV drivers who charge off-peak and take advantage of ComEd's hourly pricing program (i.e., Rider RRTP) save substantial supply costs due to the lower off-peak energy prices.

28. Discuss whether charging infrastructures should be included in the rate base if the charging infrastructure is owned by public utilities. Explain why or why not.

Yes, charging infrastructure is a long-lived asset. Capitalizing and including such costs in rate base are appropriate accounting treatments for these types of assets.

A) Discuss whether charging infrastructures should be accounted for as capital expenses. Explain why or why not.

See ComEd’s response to 28.

B) *Discuss whether charging infrastructures should be accounted for as operational expenses. Explain why or why not.*

See ComEd's response to 28.

29. *What rate designs have other utilities implemented to encourage EV adoption and how successful have they been?*

Most rate design efforts developed to encourage EV adoption have been off-peak charging to (1) improve grid utilization and (2) reduce the cost to charge existing EVs. Given the limited number of EV drivers currently, it is difficult to gauge how successful those rate designs have been. Additionally, the presence of overlapping state mandates and programs in states, such as California, make it difficult to accurately measure the effectiveness of the programs.

30. *Discuss whether EVs should be treated as distributed energy resources (DERs) for regulatory purposes. Explain why or why not.*

Given today's nascent technology and capabilities, EVs (i.e., batteries) are not generators, and therefore are not considered a distributed energy resource ("DER").

A) *Discuss whether passenger cars, transportation vehicles, and corporate fleets should be treated equally. Should one type be favored over others? Explain why or why not.*

N/A

B) *How can unique demand response programs be structured for each customer classification?*

Given the nascent of the technology and the market, it is too early to define how a demand response program should be structured for the different customer classifications.

31. *Discuss how common charging stations should be categorized for regulatory and accounting purposes.*

If the charging station is owned by the public utility, then it should be accounted for as a long lived capital asset and included in the utility's rate base.

32. *Discuss how privately-owned charging stations should be categorized for regulatory purposes.*

A) *Should common charging stations and privately-owned charging stations enjoy the same regulatory and accounting treatment?*

Privately owned charging stations would not receive regulatory treatment. The owner would be subject to standard accounting practices.

33. *Discuss what kinds of incentives could be implemented to encourage further EV penetration into the US markets.*

Incentives that could be implemented to encourage EV adoption include, but are not limited to:

- local and state tax incentives for EVs and charging stations;
- rebates for EVs and charging stations provided by the state and/or the utility;
- access to HOV lanes;
- reduced vehicle registration fees;
- reduced permitting costs for EV infrastructure; and
- reduced/eliminated highway tolls.

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Respectfully submitted,

COMMONWEALTH EDISON COMPANY